

In the Claims

1. (Previously presented) A light emitting device comprising:
a laser diode; and
a phosphor composition comprising phosphor particles that
5 are selected to have a d_{90} size in a range of about 30
micrometers to about 45 micrometers, wherein d_{90} refers to a
selected size at which 90 volume percent of the particles are
smaller than the selected size, the phosphor composition
positioned to receive light from said laser diode, the
10 phosphor composition capable of absorbing light from said
laser diode and emitting light at a wavelength longer than the
light from the laser diode, wherein the phosphor composition
comprises a first type of phosphor particles comprising a
material selected from $\text{CaS}:\text{Eu}^{2+}$, Mn^{2+} , $-\text{Mg}_4\text{GeO}_{5.5}\text{F}:\text{Mn}^{4+}$, and
15 $\text{ZnS}:\text{Mn}^{2+}$, and a second type of phosphor particles,
wherein the first type of phosphor particles emits red
light upon excitation, and the second type of phosphor
particle emits green light upon excitation.

2. (Original) The light emitting device of claim 1, wherein
20 the device is a white light emitting device.

3. (Canceled)

4. (Previously presented) The light emitting device of claim
1, wherein the first type of phosphor particles emits light
having a wavelength in the range of about 590 to about 650 nm.

25 5. (Canceled)

6. (Previously presented) The light emitting device of claim
1, wherein the second type of phosphor particles emits light

having a wavelength in the range of about 520 to about 550 nm.

7. (Previously presented) The light emitting device of claim 1, wherein the second type of phosphor particles comprises a material selected from $\text{SrGa}_2\text{S}_4:\text{Eu}^{2+}$ and $\text{ZnS}:\text{Cu}, \text{Al}$.

5 8. (Original) The light emitting device of claim 6, wherein the first type of phosphor particles emits light having a wavelength in the range of about 590 to about 650 nm.

9. (Original) The light emitting device of claim 1, wherein the phosphor composition comprises phosphor particles that
10 emit yellow light upon excitation.

10. (Original) The light emitting device of claim 9, wherein the phosphor particles emit light having a wavelength in the range of about 560 to about 580 nm.

11. (Original) The light emitting device of claim 9, wherein
15 the phosphor particles comprise $(\text{Y}, \text{Gd})_3\text{Al}_5\text{O}_{12}:\text{Ce}, \text{Pr}$.

12. (Canceled)

13. (Previously presented) The light emitting device of claim 1, wherein the phosphor composition is a conformal coating between about 100 micrometers and about 150 micrometers thick
20 provided on a surface of the laser diode.

14. (Original) The light emitting device of claim 1, wherein the phosphor composition is disposed on a surface of a lens positioned to receive light from the laser diode.

15. (Original) The light emitting device of claim 1, wherein

the phosphor composition comprises a clear polymer matrix having phosphor particles suspended therein, wherein the clear polymer matrix is shaped as a lens, the clear polymer matrix being positioned to receive light from the laser diode and to direct light from the light emitting device.

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16. (Original) The light emitting device of claim 1, wherein the phosphor composition comprises a material selected from SrS:Eu²⁺ and CaS:Eu²⁺.

10 17. (Original) The light emitting device of claim 1, wherein the phosphor composition comprises a material selected from CaS:Eu²⁺, Mn²⁺ and (Zn, Cd)S:Ag+.

18. (Original) The light emitting device of claim 1, wherein the phosphor composition comprises a material selected from Mg₄GeO_{5.5}F:Mn⁴⁺; and ZnS:Mn²⁺.

15 19. (Original) The light emitting device of claim 1, wherein the phosphor composition comprises a material selected from SrGa₂S₄:Eu²⁺ and ZnS:Cu, Al.

20. (Original) The light emitting device of claim 1, wherein the phosphor composition comprises (Y, Gd)₃Al₅O₁₂:Ce, Pr.

21. (Original) The light emitting device of claim 1, wherein the phosphor composition has a first peak emission wavelength in the range of about 620 nm to about 650 nm.

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22. (Original) The light emitting device of claim 21, wherein the phosphor composition has a second peak emission wavelength in the range of about 520 nm to about 550 nm.

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23. (Original) The light emitting device of claim 1, wherein the phosphor composition has a peak emission wavelength in the range of about 560 nm to about 580 nm.

24. (Canceled)

5 25. (Previously presented) The light emitting device of claim 1, wherein the laser diode is one of a blue laser diode, a violet laser diode, and a UV laser diode.

26-31. (Canceled)

32. (Previously presented) A light emitting device comprising:

10 a laser diode; and
a phosphor composition positioned to receive light from said laser diode, the phosphor composition capable of absorbing light from said laser diode and emitting light at a wavelength longer than the light from the laser diode, wherein
15 the phosphor composition consists of a first type of phosphor particles consisting of ZnS:Mn²⁺, and a second type of phosphor particles,

wherein the first type of phosphor particles emits red light upon excitation, and the second type of phosphor
20 particle emits green light upon excitation.

33. (Previously presented) A light emitting device comprising:

a laser diode;
a phosphor composition positioned to receive light from said laser diode, the phosphor composition capable of absorbing light from said laser diode and emitting light at a wavelength longer than the light from the laser diode; and
25 a drive circuit for operating the laser diode in at least one of a pulsed mode and a continuous wave mode.

34. (Canceled)

35. (Previously presented) The light emitting device of claim 33, further comprising:

a base;

5 a casing wall joined to the base at a first end of the casing wall; and

a transparent cap coated with the phosphor composition, the transparent cap joined to the casing wall at a second end of the casing wall.

10 36. (Previously presented) The light emitting device of claim 35, further comprising a lens positioned adjacent the transparent cap to direct light from the light emitting device.

15 37. (Previously presented) The light emitting device of claim 36, wherein the lens is a planar lens.

38. (Previously presented) The light emitting device of claim 36, wherein the lens is a dome lens.